



Healthcare Cost Savings of Calcium and Vitamin D Food Supplements in the European Union

Abstract

The objective of this report is to evaluate whether healthcare cost savings can be realised through the use of a 1,000 mg calcium + 15 µg vitamin D supplement, which has a demonstrable and substantial effect on the risk of costly disease-attributed events in high-risk populations. This report examines aggregated indications demonstrating that the use of a 1,000 mg calcium + 15 µg vitamin D supplements can potentially reduce osteoporosis-attributed hospital utilisation costs in the European Union among those at a high risk of experiencing a costly, osteoporosis-attributed event. Thus, a targeted calcium + vitamin D supplement regimen is recommended as a means to help control rising societal healthcare costs and as a means for high-risk individuals to minimise the chance of having to deal with potentially detrimental disease-attributed events.

Target Population – Osteoporosis is a significant health burden faced by over 27.8 million people age 55 and older in the European Union, of which women account for approximately 80% of the prevalence of this condition (22.2 million women). The direct cost of osteoporosis-attributed bone fracture treatment in Europe is over €26.4 billion per year and is expected to grow as Europe's population ages. This translates to an annual cost of an osteoporosis-attributed bone fracture in the EU of €21,231 per event.

Event Risk – In terms of risk, prevalence of osteoporosis is especially higher in the European Union which varies from 15% to 21% of the total population of people age 55 and older depending on the country. In 2015, there was 1.2 million disease-attributed bone fractures among people age 55 and over with osteopenia or osteoporosis in the EU who are at risk of experiencing a costly disease-attributed bone fracture which is more than any other region of the world.

Science-based Impact of Calcium + Vitamin D Use – Weaver et al. 2015 show that the use of a calcium + vitamin D supplement resulted in a 15% reduced risk of total fractures (Relative Risk (RR) = 0.85; 95% CI: 0.73–0.98). Consequently, the deduced absolute risk reduction of an osteoporosis-attributed bone fracture of any type varies from as high as 1.3% of the total number of observed fractures to a low of 0.4% in the EU.

Economic Findings (Total EU)

- Total Avoidable Osteoporosis-attributed Costs per year (€): €3.96 billion
- Net Avoidable Osteoporosis-attributed Costs per person per year (B/Pop): €2.82 billion
- Benefit/cost ratio (€ Avoided Osteoporosis-attributed Costs per €1 spent on calcium + vitamin D): €3.47



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